ARACENA

USER'S MANUAL

MA01-02/B
15/09/2011

CE

DAVI & CIA
www.davicia.com

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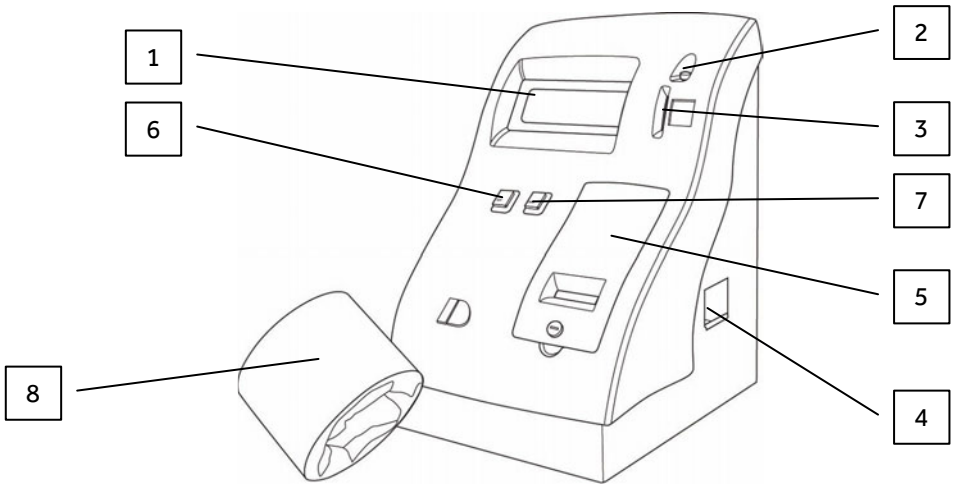
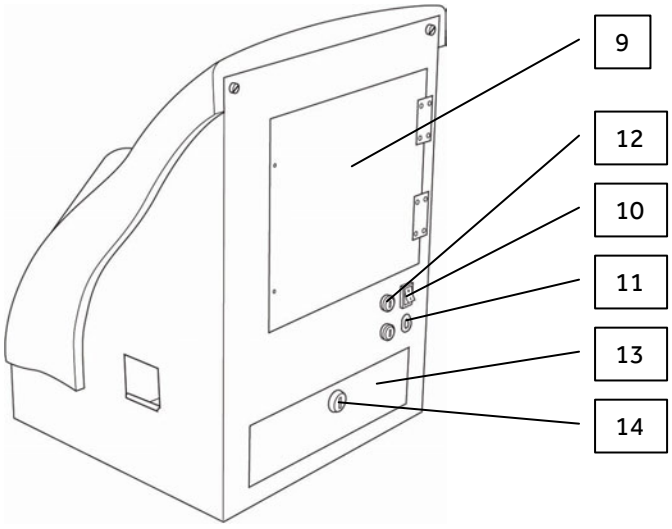
1. DESCRIPTION



(1) Screen
(2) Coin return button
(3) Coin insert slot
(4) Coin hatch
(5) Printer cover
(6) STOP button
(7) START button
(8) Cuff



(9) Back door (maintenance only)
(10) ON/OFF switch
(11) Power supply cable
(12) Fuses
(13) Coin collection drawer
(14) Key

2. INSTALLATION

ARACENA equipment comes factory configured according to the voltage of each country and is ready for operation immediately after unpacking.
Connect the device to the power supply via the power supply cable. It is necessary that the outlet is provided with grounding. Adapters should not be used without grounding.

2.1. UNPACKING

Remove the security tape and the packaging protecting the appliance. Do not use any sharp instruments, as they might damage the equipment.

Inside the packaging you will fi nd:

- The Aracena blood pressure
- User's manual
- Coin box key
- 1 key ring
- 4 table lock screws
- 2 roll of heat-sensitive paper
- 1 paper roll spindle
- 1 programming keyboard

For its security and comfort, the Aracena must be placed on the supplied table. Attach the four screws supplied with the equipment. On the base of the Aracena there are four protrudings used as stops where there is a screwed drillhole. Facing the Aracena base drillholes with the table drillholes, attach the screws at the back side of the table.

Read the instructions carefully before connecting the Aracena blood pressure.

2.2. LOCATION AND SETTING

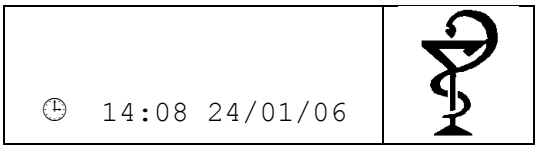
Set the equipment in a place flat and level, where it is perfectly supported. This last point is of vital importance to proper operation.

2.3. STARTUP

- Connect the equipment to the power supply.
- Actuate the switch on the back.
- At this point the equipment will perform the process of self-test.
- If the process of self-test completes successfully, the screen displays the price of the service and the current time.

3. OPERATION

After the equipment startup appears the home screen. **This means that the equipment has done the calibration successfully and is ready for use.**



Pantalla de Inicio

3.1. ADVERTISING AND PRICES

On the home screen appear the advertising messages that have been programmed (see 4.2.3. Programming advertising) and the current time (see 4.2.1. Time setting)

If you press the START button before inserting any coin, a message appears on the screen indicating the price of the service.

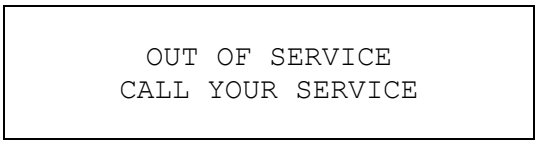
Upon reaching the programmed price by inserting coins, the measurement process begins.

3.2. BLOOD PRESSURE

After inserting the price amount, an acoustic signal alerts you that the process will begin. The screen displays the following message:

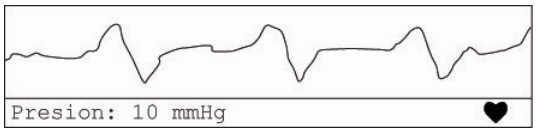
Insert the left arm (fully exposed) in the cuff, as shown in the illustration, so that the elbow rests on the table. To start the measurement press the START button.

You hear a beep and the cuff inflated process begins. The process of inflating the cuff takes 10 to 15 seconds, and stops when it reaches a pressure of 180 mm Hg. If the process takes over 45 seconds, then a failure has occurred. In that case, the ARACENA will stop and display the following message on the screen:



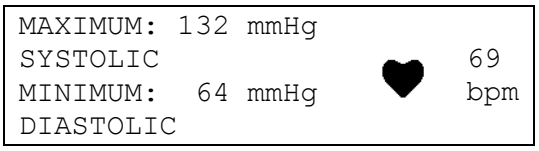
If pulses are detected, the cuff pressure is increased another 60 mmHg repeating pulse detection operation. Pulses reached in cuff are: 80 mmHg , 240 mmHg and 300 mmHg.
If pulses are still detected the ARACENA stops and displays an error message indicating to remove the arm from the equipment.

If no pulse is detected for 5 seconds, the equipment will assume that the cuff pressure has exceeded the systolic pressure. The display shows the cuff pressure, which gradually descends at a rate of about 3 mmHg / sec. Each time a pulse is detected, a heart appears on the screen, accompanied by an acoustic signal. The screen shows a graph of heart rate.



If the cuff pressure falls below 40mmHg, an error will occur and ARACENA will stop before completing the measurement. The screen will display an error message indicating to remove the arm from the equipment.

The pressure falls to 0 mmHg. Then, the display shows the values obtained:



WARNING: Do not self-medicate based on measurements made with the equipment.

3.3. PRINTED RESULTS

Upon completion of the selected measurements, the equipment automatically prints a receipt with the obtained results including the recommended values for each measurement performed.

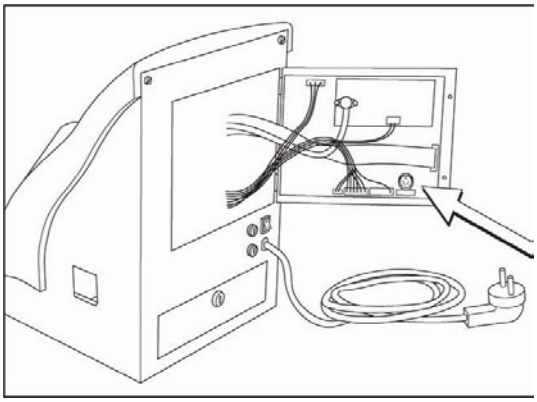
4. SETUP

4.1. ACCOUNTING

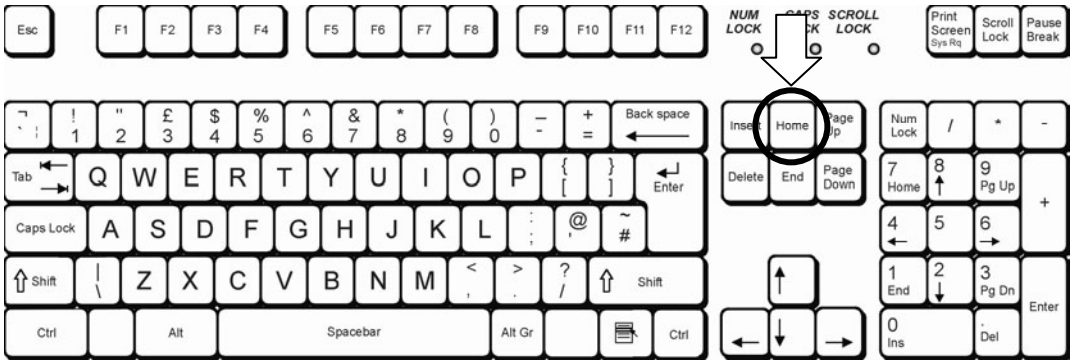
To issue an accounting ticket of the equipment, see the chapter below, 4.2.6. Accounting receipt.

4.2. PROGRAMMING

To proceed to the programming, we need a standard computer keyboard with USB or PS2.
With the equipment turned off, connect the keyboard to the connector on the motherboard, which is located behind the rear door of the equipment (see 1. Description - # 9).



Turn on the equipment and wait for the home screen.
Press the key HOME on the keyboard and hold it down 5 seconds.



The following display will appear:

```
>>
 12:39 o 15/09/11
```

IMPORTANT: Use the BACK SPACE key from the keyboard to make sure the screen cursor is at the beginning of the line, right next to the symbol>. Otherwise, when you type to access the programming options, the equipment will not recognize the entered code.

The options that are accessed through the user menu are:

PH	Time setting
PF	Date setting

PT	Programming the ticket
PP	Price programming
PA	Programming advertising
PC	Receipt

Keyboard operation

We will use the keyboard to enter all data. When using the programming menu, it's important to consider the following functions:

Key	**Function**
HOME	Enter the programming mode
ESC	Exit the programming mode
↵	Confirm selection

4.2.1. Time setting

Press the **PH** keys to set the time and then confirm the selection by pressing the key ↵
The screen displays the following message:

```
TIME (HH:MM)

🕒 12:39 o 15/09/11
```

Use the keyboard to enter the hours and the minutes, separated by a colon. Press the ↵ key to save the information. For example, in order to enter 15 hours 35 minutes, type:
1 5 : 3 5

NOTA: Recuerde que la hora se introduce en formato de 24 horas, de 0 a 24

4.2.2. Date setting

Press the **PF** keys to set the date and then confirm the selection by pressing the key ↵
The screen displays the following message:

```
DATE (MM.DD.YY)

🕒 12:39 o 15/09/11
```

Use the keyboard to enter the month, day and year in this order, each separated by a period. Press the ↵ key to save the information. For example, to enter the date of 23rd March 2006, type:
2 3 . 0 3 . 0 6

4.2.3. Price programming

Press the **PP** keys to set the price of the service and then confirm the selection by pressing the key ↵
The screen displays the following message:

```
PRICE

🕒 12:39 o 15/09/11
```

Use the keyboard to enter the desired amount and then confirm the selection by pressing the key ↵
Si If you want the blood pressure to work without coins, enter a price of 0.

NOTE: If switch 7 of the motherboard of the equipment is ON, the tensiometer will always work without coins, regardless of whether there is a programmed price.

4.2.4. Programming advertising

This option can be used to set the text that will appear on the screen as a static message, distributed in 5 successive screens. To program the message, there is a total of 99 characters available (blanks are also considered characters).

Press the **PP** keys to set the advertising text and then confirm the selection by pressing the key ↵
The screen displays the following message:

```
ADVERTISING

🕒 12:39 o 15/09/11
```

Enter text using the keyboard, the text appears on the screen.
Once you have entered all the text, press the ↵ key to save it in the memory.

NOTE: The text is entered all at once; however the ARACENA arranges it on the 5 available screens by cutting it into strings of 20 characters.

4.2.5. Programming the ticket

We have four lines at the top of the ticket and 19 lines at the bottom of the ticket, with 23 characters (normal mode) and 11 characters (expanded mode) for each line.

Key	Sample	Character Type	Characters per line
		Normal	23 characters
F1		Horizontally expanded	11 characters
F2		Vertically expanded	23 characters
F3		Doubly expanded	11 characters

NOTE: By default, the equipment performs text programming in Normal mode.

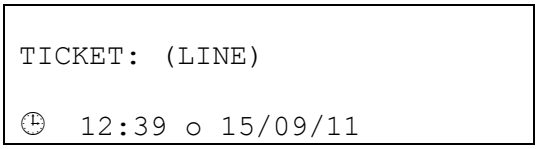
Keyboard operation

Key	Function
F8	Delete a line
F9	Indicate end of ticket

Programming of the ticket header

Lines 1 through 4 contain the header of the ticket and are used to program the pharmacy data (name, address, phone, etc.).

1. Press the **PT** keys to program the ticket and then confirm the selection by pressing the key ↵
   The screen displays the following message:



2. Enter the line number to be programmed (1, 2, 3 or 4) and then confirm with ↵ key.
   The selected line is displayed on the right of the screen and you can enter the desired text with the keyboard.
3. By default, characters are represented in normal mode. To present the text in a different mode, after pressing the line number, press the key corresponding to the desired option (F1 to F3, see the table of keys). This information appears at the beginning of the line, p. eg. F2 = 2>.
4. Enter the text for the selected line and press ↵ to confirm the changes. The text is saved in memory.
5. To program the other ticket lines, repeat the process from Step 1.

Programming the foot of the ticket

The foot of the ticket can be programmed to have 16 lines, from 24 to 40. This area is ideal to advertise other pharmacy services (eg., Special formulas, homeopathy, etc.).
No need to program the 16 lines if you wish, but the "end of line" (Steps 6 to 8) must always be stated in the last line.

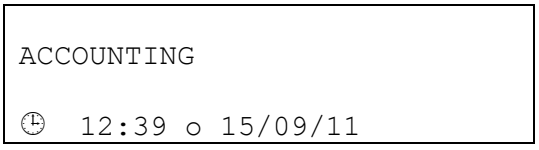
1. Press the **PT** keys to program the ticket and then confirm the selection by pressing the key ↵
2. When the ticket programming screen appears, enter the line number to be programmed (24 - 40) and then confirm with ↵
   The selected line is displayed on the right of the screen and you can enter the desired text with the keyboard.
3. By default, characters are represented in normal mode. To present the text in a different mode, after pressing the line number, press the key corresponding to the desired option (F1 to F3, see the table of keys). This information appears at the beginning of the line, p. eg. F2 = 2>.
4. Enter the text for the selected line and press ↵ to confirm the changes. The text is saved in memory.
5. To program the other ticket lines, repeat the process from Step 1.

Once all the text lines have been programmed, you must set the "end of ticket":

6. Press the **PT** keys to program the ticket and then confirm the selection by pressing the key ↵
7. When the ticket programming screen appears, enter the line number which follows the last programmed text line. For example: If the last programmed line is 28, then type 29.
8. Press F9 to select "End of ticket" (screen will display 9>). Press ↵ to save changes in the memory.

4.2.6. Accounting receipt

Press the **PC** keys to program the accounting receipt and then confirm the selection by pressing the key ↵
The screen displays the following message:



Then, press ↵. The equipment will issue three copies of the accounting receipt – stating the amount of coins inserted to date (whether partial or total) – and will reset the partial counter.

5. MAINTENANCE AND CLEANING

The only maintenance that can be performed by unqualified personnel is the change of paper roll.

Do not perform repairs on your own. In case of breakdown contact the Technical Support Service.

If the power cable is damaged, it must be replaced by the Technical Support Service or qualified personnel in order to avoid dangerous malfunctioning.

To ensure accurate results, the equipment ARACENA **requires an annual maintenance check that only authorized personnel from the Davi & Cia Technical Support Service can perform.**

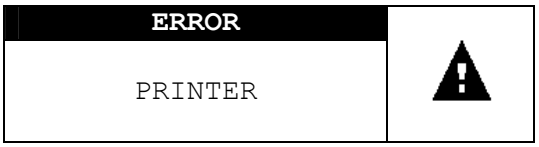
Clean the unit using only a soft cloth. Do not use gasoline or any similar solvent.

5.1. CLEANING THE BLOOD PRESSURE CUFF

Clean with a cloth soaked in a mixture of water and detergent. To dry, use a dry cloth.

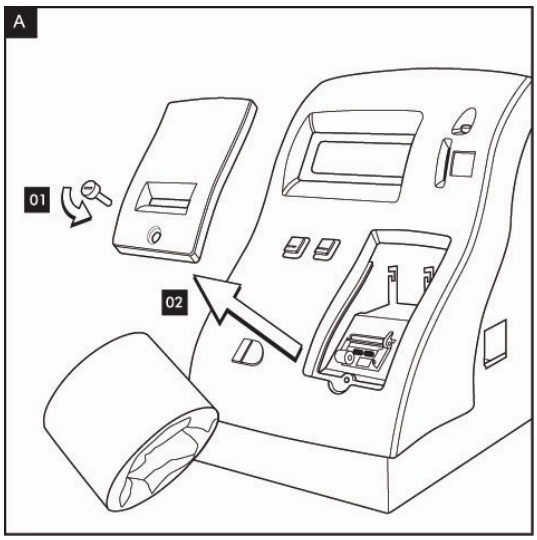
5.2. PAPER ROLL CHANGE

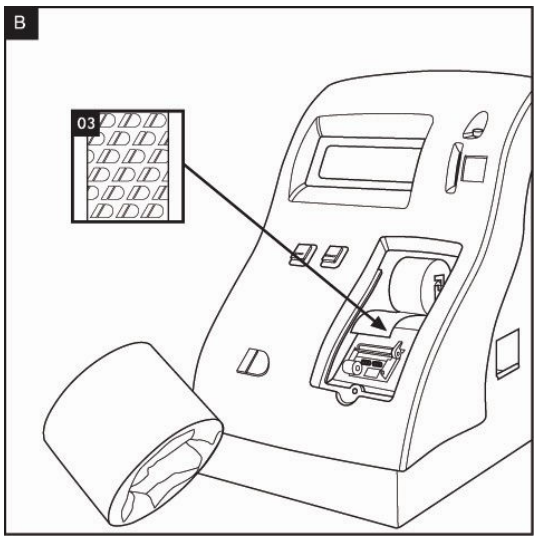
When the ARACENA runs out of paper, it stops working and the following message is displayed:



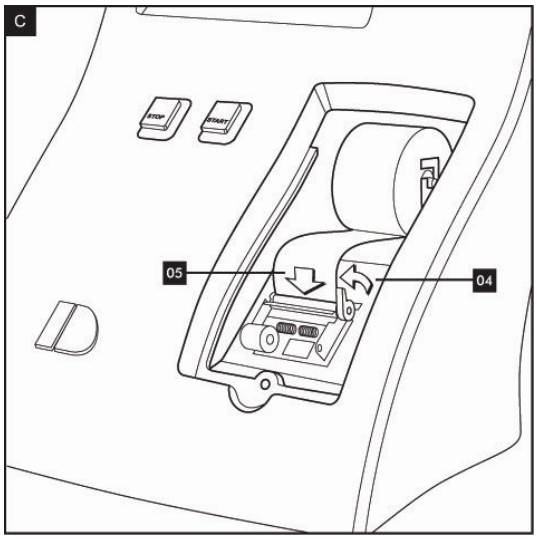
To change the paper roll:

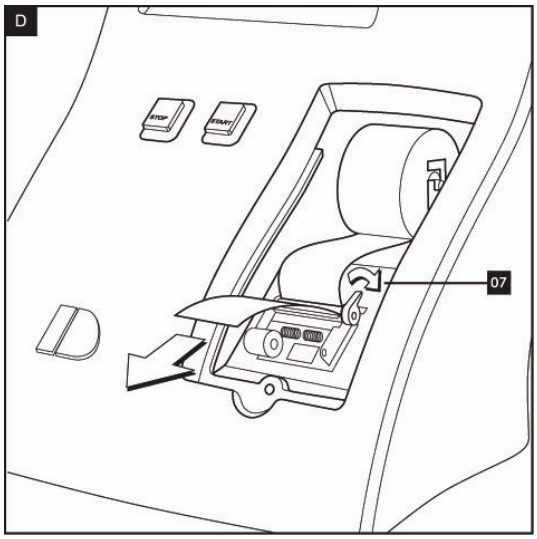
- Switch off the equipment





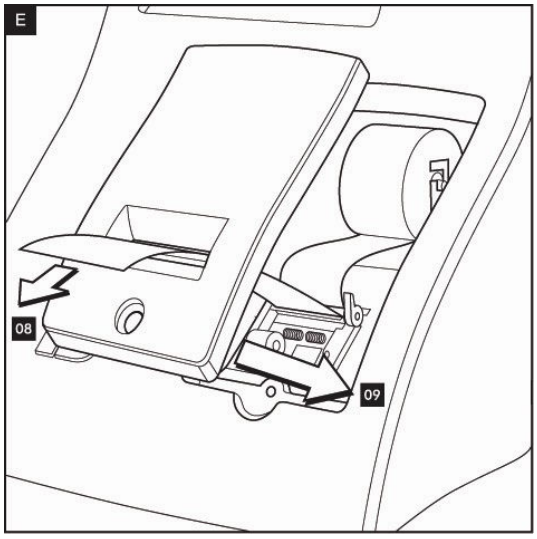
1. To access the printer, remove the cover where is the paper cutter
2. Unscrew the screw with a coin
3. Take out the empty paper roll and replace it with a new one





4. Pull the lever to open the printer mechanism

5. Feed the paper 2 ½ inches though the slot (C)

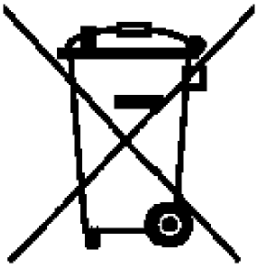


NOTE: If results are not printed on the paper check that it has been placed correctly, since it is a thermal printer and only one side of the paper is heat sensitive.

6. Insert the paper through the paper-cutter located on the cover of the printer
7. Turn on the equipment

5.3. EQUIPMENT DISPOSAL

All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.



This crossed-out wheeled bin symbol on the product means the product is covered by the European Directive 2002/96/EC.

The correct disposal and separate collection of the equipment will help prevent potential negative consequences for the environment and human health. It is a precondition for reuse and recycling of used electrical and electronic equipment.

6. TECHNICAL SPECIFICATIONS

Model:	ARACENA
Manufacturer:	DAVI & CIA C/Murcia 35 nave G E08830 Sant Boi de Llobregat Barcelona – SPAIN
Display:	LCD Graphic 240 x 64 pixels
Weight:	12 kg (aprox.)
Maximum external dimensions:	46 x 37 x 37.5 cm
Cuff: Type: Capacity:	 Cylindrical 13 x 13 Min. 20 cm / Max. 35 cm
Measurement range: Blood pressure: Heart rate:	 40 to 300 mmHg in div. 1 mmHg 40 to 200 bpm
Measurement methods:	Oscillometric method
Measurement accuracy: Static pressure:	 +/- 3 mmHg
Power supply:	230V~, 50/60 Hz 115V~, 50/60 Hz
Consumption:	In operation, max. 50 VA
In operation: Temperature: Humidity:	 0 °C to +40 °C 30 % to 75 %
Printer:	Thermal printhead 8 dots/mm. 384 dots/line, 32 characters per line. Speed = 40 mm/s.
Paper width:	58 mm
Fuses primary circuit: Power supply 230V: Power supply 115V: Fuses secondary circuit: (On board):	 2 x 0.5 A 5 x 20 mm, type M 2 x 1.0 A 5 x 20 mm, type M 1 x 2.0 A 5 x 20 mm, type M
Classification according to Measuring Instrument standards and applicable EC Directive	Directive 93/42/CE Class IIa
Applicable Standards:	*SEGURIDAD ELÉCTRICA / Electrical Security* UNE EN 60601-1 (1990) + A1 (1993) + A11 (1993) + A12 (1993) + A2 (1995) + A13 (1996) EN 60601-1-2 & EN 50081-1: *EMISIÓN ELECTROMAGNÉTICA / EM Emission.* -EN 55011 / A1 -EN 55014-1 (1993) / A1 (1997) -EN 55022 (1994) / A1 / A2 -EN 61000-3-2 (1995) -EN 61000-3-3 (1995) EN 60601-1-2 & EN 50082-1: *INMUNIDAD ELECTROMAGNÉTICA / EM Immunity.* -EN 61000-4-2 (1995): Descarga electrostática / ESD; -EN 61000-4-3 (1996): Campo radiado EM de RF / EM radiated field of RF;

	-EN 61000-4-4 (1995); Ráfagas de transitorios rápidos / EFT burst; -EN 61000-4-5 (1995); Ondas de choque / Surges; -EN 61000-4-6 (1996): RF en modo común / RF common mode; -EN 61000-4-8 (1993): Campo magnético a 50 Hz / 50 Hz H field; -EN 61000-4-11 (1994); Interrupciones de alimentación / Dips, interruptions.

7. WARRANTY CERTIFICATE

We provide a **1-year** guarantee from the date of purchase. The guarantee covers manufacturing defects or defects occurring as a result of normal use and operation.

It excludes all removable parts such as batteries, wires, power supply devices, etc. Faults falling within the guarantee period shall be rectified free of charge upon presentation of the purchase receipt for the appliance. No other rights can be taken into consideration.

Return shipment is at the customer's expense if the appliance is anywhere other than at the customer's headquarters.

In the event of damage during shipment, guarantee rights will be granted only if the appliance is shipped in the original packaging. You are therefore recommended to keep the original packaging.

Following expiry of the guarantee period, all services requested will be dealt with by our specialist technicians at the user's expense.

8. CE DECLARATION OF CONFORMITY

FABRICANTE PRODUCTO: DAVI & CIA S.L.
PRODUCT MANUFACTURER:

DIRECCIÓN: C/ Murcia, 35, Nave G
ADDRESS Polígono Industrial Can Calderón
E08830 Sant Boi de Llobregat
BARCELONA - ESPAÑA

DECLARAN BAJO SU RESPONSABILIDAD QUE EL PRODUCTO:
DECLARE UNDER THEIR RESPONSIBILITY THAT THE PRODUCT

Nombre ARACENA
Name

Tipo EQUIPO ELECTROMÉDICO / MECÁNICO
Type Electromedical / mechanical equipment

Finalidad Prevista Esfigmomanómetro automático.
Intended Use *Automatic sphygmomanometer.*

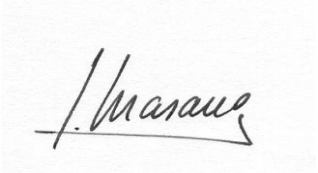
CUMPLE LOS REQUISITOS DE LAS DIRECTIVAS:
CONFORMS WITH THE REQUISITES OF THE DIRECTIVES

Conforme a la directiva **93/42/CE**, relativa a los Productos Sanitarios modificada por la directiva **2007/47/CE**. Transposición a la legislación española en Real Decreto **1591/2009**.

*According to the Directive **93/42/CE**, related to medical devices as amended by Directive **2007/47/CE**. Transposition into Spanish law through Royal Decree **1591/2009**.*

Clasificación: Clase IIa.
Classification: *Class IIa.*

FECHA: 15 de Abril de 2010 ***DATE:*** 15th *April 2010*

Nombre: ***Name***	J.Masana
Firmado: ***Signed***	
Cargo: ***Function***	**Director** DAVI & CIA

This manual and other support documents are available on the web

www.davicia.com

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